

Conservative treatment of anal canal cancer

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Purpose. *Sphincter preservation by radiation therapy with or without simultaneous chemotherapy has become a widely accepted standard treatment for patients with anal cancer. Our experience with 97 patients was analyzed to evaluate local control and late morbidity according to stage and treatment method.*

Patients and methods. *Between January 1983 to December 1999, 97 patients with anal cancer were treated by external beam radiotherapy (EBRT). A median total dose of 50 Gy was delivered to the primary tumor region as well to the perirectal lymph nodes. Patients were staged according the UICC Classification: 40 T1, 31 T2, 14 T3, 12 T4. Female to male ratio was 79 to 18. Mean age of all patients was 66 years. Pretreatment procedures included tumor excision or biopsy, endoscopy, transrectal sonography and examinations to exclude distant metastases. Fifty patients (51.5%) received simultaneous chemotherapy with Mitomycin C and 5-Fluorouracil. An additional boost (electron beam or implant) to the primary tumor was delivered to 67 patients (69%). Forty-seven patients received external beam therapy followed by interstitial Iridium-192 high dose rate (IR-192 HDR) implantation as boost (5 – 7 Gy) in one fraction. We obtained an optimal fixation of the needles and precise parallel needle positions with a cylinder applicator for the rectal lumen and a ring fixation system in addition to a semicircular template. To obtain an image of the implant, the patient had to be shifted to the CT-scanner by using a special transportation device. The implanted needles were visualized by CT-scan.*

Results. *Overall survival rate (OS) at 5 and 10 years was 87.3 % and 72.7% respectively, disease-specific survival (DSS) was 88% at 5 years and 10 years, local control rate (LC) was 86% at 5 and at 10 years. Mean follow up of all survivors was more than 50 months.*

Conclusion. *Radiotherapy is a standard treatment for patients with cancer of the anal canal. Additional chemotherapy showed improved local control rates and overall survival in patients with T3 and T4 tumors. Our results also indicate that the external beam therapy combined with IR-192 HDR brachytherapy as a boost is highly effective in achieving local control without severe grade 3 toxicity. Late toxicity is moderate by delivering boost doses not exceeding a volume of 60 ccm.*

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